IN THE CLAIMS

Please make the following amendments to the claims.

1. (Currently Amended) A system for measuring a weight on a vehicle seat while providing overload protection comprising:

a seat assembly having a seat back and a seat bottom;

a seat track assembly for mounting said seat assembly to a vehicle base member, said seat bottom being movable by said track assembly to provide horizontal seat adjustment;

at least one sensor assembly mounted to said seat track assembly, said sensor assembly including a plate with a deflectable central body portion and at least one strain gage mounted on said central body portion for measuring strain resulting from a [normal] weight force being applied to said seat bottom; and

a resilient beam member mounted between said plate and said vehicle base member, said beam member being deflectable in response to an overload force applied to said seat track assembly in a direction [opposite to] different than the direction of [a normal] said weight force application to prevent failure of said sensor assembly.

2. (Original) A system according to claim 1 wherein said resilient beam member is a spring having a first spring end attached to said base member and a second spring end attached to said plate.

3. (Original) A system according to claim 2 wherein said plate has a first plate end mounted to said track assembly and a second plate end mounted to said second spring end.

4. (Currently Amended) A system according to claim 3 wherein said second spring end is constrained from downward deflection by said vehicle base member resulting in S-shaped bending in said central body portion due to [a normal] said weight force [application].

5. (Currently Amended) A system according to claim 3 wherein said second spring and plate ends deflect upwardly away from said vehicle base member during an overload force application applied in a direction opposite to a weight force application.

6. (Currently Amended) A system according to claim 1 including a first gap formed between said central body portion of said plate and said track assembly and a second gap formed between said central body portion of said plate and said beam member.

7. (Original) A system according to claim 1 including an overload stop reacting between said track assembly and said vehicle base member to prevent separation of said seat assembly from said vehicle base member due to said overload force.

8. (Original) A system according to claim 7 wherein said track assembly includes a track opening having a first predetermined cross-sectional size and said overload stop comprises a fastener secured at one end to said vehicle base member with an opposite end extending through said track opening with an enlarged head portion having a second predetermined cross-sectional size greater than said first predetermined cross-sectional size

wherein said track assembly engages said head portion during application of said overload force to prevent separation.

9. (Currently Amended) A system according to claim 8 including an overload gap formed between a bottom track surface and said head portion wherein said overload gap is at least three millimeters during [normal] weight force application and wherein said overload gap is eliminated during overload force application.

10. (Currently Amended) A system according to claim 1 wherein said vehicle base member includes a recess extending underneath said sensor assembly, said recess having a support surface against which said beam member reacts during [normal] weight force applications to prevent downward deflection of said beam member.

11. (Currently Amended) A weight sensor assembly with overload protection comprising:

a plate having a first connection portion engageable with an upper seat structure and a second connection portion;

a bendable central body portion extending between said first and second connection portions;

a strain gage assembly mounted on said central body portion for measuring the strain resulting from [normal] a weight force application exerted against the upper seat structure; and

a resilient beam mounted between said second connection portion of said plate and a vehicle base member, said beam member being deflectable to prevent failure of said sensor assembly in response to an overload force applied in an opposite direction to said [normal] weight force application.

12. (Currently Amended) An assembly according to claim 11 wherein said vehicle base member includes a recess extending underneath said plate, said recess having a support surface against which said beam member reacts during [normal] weight force applications to prevent downward deflection of said beam member.

13. (Original) An assembly according to claim 12 wherein said resilient beam member deflects upwardly away from said support surface in response to an overload force application to prevent permanent deformation of said plate or strain gage assembly failure.

14. (Original) An assembly according to claim 13 including an overload stop comprising a fastener attached at one end to said vehicle base member and extending to an opposite end that supports an enlarged head portion wherein said track assembly engages said head portion during overload force applications to prevent said seat from separating from said vehicle base member.

15. (Original) An assembly according to claim 14 wherein said resilient beam member is a spring having a first spring end attached to said base member and a second spring

end attached to said plate with a spring body extending between said first and second spring ends, said spring body being spaced apart from said central body portion of said plate to define a gap.

16. (Currently Amended) A method for providing overload protection for a vehicle seat weight sensor assembly comprising the steps of:

mounting an upper seat structure to a vehicle base member;

mounting a plurality of weight sensors to the upper seat structure which bend in response to application of a [normal] weight force to the upper seat structure;

mounting a resilient beam member between each weight sensor and the vehicle base member; and

deflecting the beam member and the weight sensors to prevent failure of the weight sensors in response to an overload force applied in [an opposite] a different direction [to] than the direction of [a normal] the weight force [application].

17. (Original) A method according to claim 16 including mounting one end of the beam member to the vehicle base member and an opposite end of the beam member to the weight sensor, and forming a gap between a center body portion of the beam member and a center body portion of the weight sensor.

18. (Currently Amended) A method according to claim 17 wherein the [normal] weight force is applied downwardly toward the vehicle base member and the overload force is applied upwardly away from the vehicle base member.

19. (Original) A method according to claim 18 including the step of preventing separation of the upper seat structure and the vehicle base member with an overload stop.